

We claim:

- Sub C1
1. A method of using a printing plate, which comprises, in a first step, setting an image on the printing plate in an imaging machine, while holding the printing plate firmly on a magnetic cylinder of the imaging machine during the imaging process, and in a second step, printing in a printing machine with the printing plate having the image set in this manner.
  2. The method according to claim 1, which includes, in the first step, attracting with the magnetic cylinder a magnetically attractable carrier layer of the printing plate, while setting the image on a printing layer applied to the carrier layer.
  3. The method according to claim 1, which includes, in the second step, while printing with the printing plate, firmly holding the printing plate on a magnetic cylinder in the printing machine.
  4. The method according to claim 1, which includes providing a flexographic printing plate as the printing plate.
  5. An imaging machine for setting an image on a printing plate, comprising a magnetic cylinder for holding the printing plate firmly during the setting of an image thereon.
- Sub C2

6. The imaging machine according to claim 5, wherein said magnetic cylinder has a register system for aligning the printing plate.

7. The imaging machine according to claim 5, wherein said magnetic cylinder has at least one clamping device for firmly clamping the printing plate.

8. The imaging machine according to claim 5, wherein said magnetic cylinder has at least one permanent magnet for attracting the printing plate.

9. The imaging machine according to claim 5, wherein the imaging machine is a plate-exposing machine.

10. The imaging machine according to claim 5, wherein the imaging machine is a plate-developing machine.

11. The imaging machine according to claim 5, wherein the imaging machine is a plate-engraving machine.

12. A printing machine having a magnetic cylinder for holding a printing plate, the magnetic cylinder comprising a register system for aligning the printing plate, and at least one clamping device for firmly clamping the printing plate.

13. The printing machine according to claim 12, wherein said register system comprises register pins for engaging in register cut-outs formed in the printing plate.

14. The printing machine according to claim 13, wherein said register cut-outs are formed in a dimensionally stable carrier layer of the printing plate, and a printing layer is permanently joined to said carrier layer.

15. The printing machine according to claim 12, wherein said clamping device has a clamping jaw for clamping one end of the printing plate.

16. The printing machine according to claim 12, wherein said magnetic cylinder is formed with a circular circumferential line, and the printing plate held by the magnetic cylinder extends partly bent over under said circular circumferential line of said magnetic cylinder.

17. A method of producing a flexographic printing plate, which comprises firmly joining to a carrier layer of the flexographic printing plate a printing layer having no image yet set thereon, and then setting an image on the printing layer.

18. The method according to claim 17, which includes, before joining the printing layer to the carrier layer, setting an image on a rear side of the printing layer, and curing it thereby and, after the printing layer has been joined to the carrier layer, setting an image on a front side of the printing layer.

19. The method according to claim 17, which includes, while setting an image on the flexographic printing plate, firmly holding the plate on a rotating cylinder (for example magnetic cylinder 8).

20. The method according to claim 19, which includes providing a magnetic cylinder as the rotating cylinder.

21. The method according to claim 19, which includes providing the cylinder as a constituent part of an imaging machine provided for setting an image digitally on the flexographic printing plate.

22. The method according to claim 17, which includes, before setting an image on the printing layer, forming register cut-outs in the carrier layer.